

JAVIERA CÁRDENAS, ANGEL BALTANÁS, RICARDO FIGUEROA,
GABRIELA CUSMINSKY, CECILIA LAPRIDA, JOSEFINA RAMON MERCAU,
DENISSE ALVAREZ & ROBERTO URRUTIA

CONTRIBUTION TO THE KNOWLEDGE
OF CONTINENTAL OSTRACOD FROM CHILE

INTRODUCTION

Our knowledge of continental ostracods in South America is still in its infancy with a total of only 260 species (MARTENS & BEHEN, 1994). Particularly in Chile, it is still scarce and scattered, with large voids in the taxonomy and distribution. In Chile, the first records were reported by DADAY (1902), BREHM (1934) and LÖFFLER (1961a, b). Later, SCHWALB & BURNS (1999) cited species of Limnocytheridae and KARANOVIC (2012) provided new records of Candonidae from Chile.

The main objective of this work is to provide a checklist of ostracods in Chile with updated distributional records.

METHODOLOGY

The checklist is based on literature review and recent sampling surveys from lakes of the Yali Complex (33°S, 71°W) and Cisnes Lake (47°S, 72°W) (Fig. 1). Samples in the Yali Complex were obtained with a 250 µm net and fixed in 70% alcohol. Samples in the Cisnes Lake were collected from a sediment core. Water temperature, pH and conductivity were measured during the surveys (Tab. 1).

Later, the samples were processed and individuals were identified up to species.



Fig. 1 — Location of **a**, Yali Complex, **b**, Lake Cisnes.

Table 1
Physico/Chemical parameters

Site	T (°C)	pH	Conductivity (μS/cm)
L. Salinas E-1	13	9,4	667
L. Peral E-1	12	7,7	1288
L. Matanza E-2	12	7,5	1286
L. Colejuda E-3	11,6	8,4	52200
L. Cisnes	15,7	9,5	390

RESULTS

A total of 47 species, 24 genus and 7 families were recorded. Six of these species are new to Chile: a) *Eucypris virens*, b) *Cypris pubera*, c) *Heterocypris incongruens*, d) *Kapcypridopsis megapodus*, e) *Limnocythere patagonica*, f) *Penthesilenula inca* (Tab. 2, Fig. 2).

Table 2
Checklist of non-marine ostracods from Chile.

Phylum Crustacea	Class Ostracoda	Order Podocopida	Genus	Species
		Family		
		Cyprididae	<i>Amphicypris</i>	<i>A. nobilis</i>
			<i>Chlamydotheca</i>	<i>C. incisa</i>
				<i>C. symmetrica</i>
			<i>Cypris</i>	<i>C. pubera</i> <i>C. pubera</i> E1-E2*
				<i>C. chilensis</i> First record in S. America
				<i>C. bimaculata</i>
				<i>C. ochracea</i>
				<i>C. violacea</i>
				<i>C. vidua</i>
			<i>Cypridopsis</i>	<i>C. pseudoparva</i>
			<i>Eucypris</i>	<i>E. virens</i> <i>E. virens</i> E3 *
				<i>E. noodti</i>
				<i>E. trapezoides</i>
			<i>Hemicypris</i>	<i>H. salaria</i>
			<i>Heterocypris</i>	<i>H. incongruens</i> <i>H. incongruens</i> E2-E3. First record in continental Chile
				<i>H. panningi</i>
				<i>H. salina</i>
			<i>Herpetocypris</i>	<i>H. pectinata</i>
				<i>H. reptans</i>
			<i>Ilyodromus</i>	<i>I. verreauxi</i>
			<i>Kapcypridopsis</i>	<i>K. megapodus</i> <i>K. megapodus</i> *: L. Cisnes
			<i>Isocypris</i>	<i>I. beauchampi</i>
			<i>Neocypridopsis</i>	<i>N. granulosa</i>
				<i>N. paradisea</i>
			<i>Plesiocypridopsis</i>	<i>P. silvestrii</i>
			<i>Sarscypridopsis</i>	<i>S. aculeata</i>
			<i>Strandesia</i>	<i>S. donnetii</i>
				<i>S. marina</i>
			<i>Tanycypris</i>	<i>T. marina</i>
		Notodromadidae	<i>Newnhamia</i>	<i>N. patagonica</i>
		Candonidae	<i>Candona</i>	<i>C. araucana</i>
				<i>C. albida</i>
				<i>C. quasiincavum</i>
			<i>Latinopsis</i>	<i>L. patagonica</i>
		Ilyocyprididae	<i>Ilyocypris</i>	<i>I. bradyi</i>
		Darwinulidae	<i>Penthesilenula</i>	<i>P. araucana</i> <i>P. inca</i> * L. Cisnes. Extended the distribution
				<i>P. inca</i>
			<i>Darwinula</i>	<i>D. dicastrii</i>
				<i>D. sp</i>
		Limnocytheridae	<i>Limnocythere</i>	<i>L. arthuri</i> <i>L. patagonica</i> * L. Cisnes
				<i>L. atacamae</i>
				<i>L. inopinata</i>
				<i>L. bradburyi</i>
				<i>L. patagonica</i>
				<i>L. sp</i>
			<i>Cytheridella</i>	<i>C. ilosvayi</i>
		Cytherideidae	<i>Cyprideis</i>	<i>C. beaonensis</i>

* First record in Chile

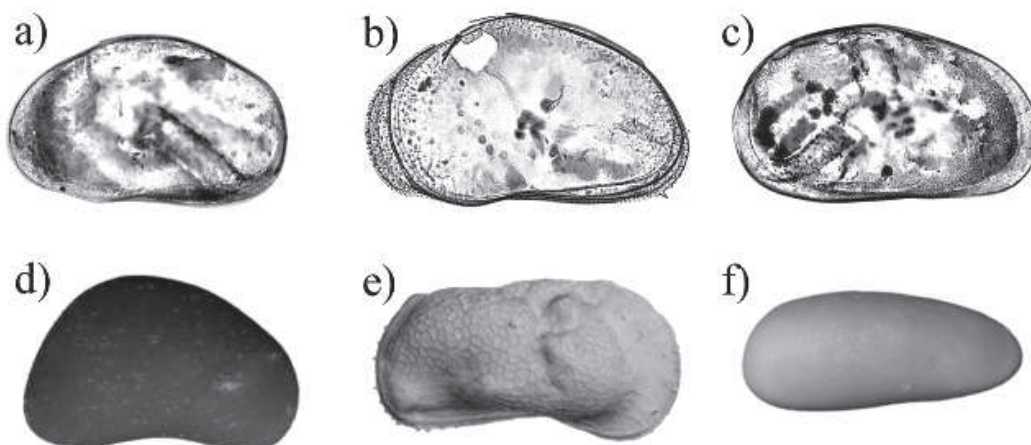


Fig. 2 — **a**, *Eucypris virens* (Jurine, 1820); **b**, *Cypris pubera* Müller, 1776; **c**, *Heterocypris incongruens* (Ramdohr, 1808); **d**, *Heterocypris salina* (Brady 1868); **e**, *Kapcypridopsis megapodus* Cusminsky and Whatley, 2005; **f**, *Limnocythere patagonica* Cusminsky and Whatley, 1996; **g**, *Penthesilenula inca* (Delachaux, 1928).

CONCLUSIONS

This work shows an updated checklist and new records of ostracods in Chile. Taxonomic and biogeographic knowledge of ostracods is a valuable tool for environmental studies and for the reconstruction of palaeoenvironments.

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REFERENCES

- BREHM V., 1934. Über sudamerikanische Ostrakoden. *Zool. Anz.*, 108: 74-85.
 DADAY E., 1902. Mikroskopische Süswasserthiere aus Patagonien. *Természettudományi Közlemények*, 25: 201-310.
 KARANOVIC I., 2012. Recent freshwater ostracods of the world: Crustacea, Ostracoda, Podocopida. Springer Press, 604 pp.
 LÖFFLER H., 1961a. Beiträge zur Kenntnis der iranischen Binnengewässer II. *Inter. Rev. Ges. Hydro*, 46: 309-406.
 LÖFFLER H., 1961b. Zur Systematik und Ökologie der chilenischen Süß. *Beit. Neotr. Fauna* 2: 197-206.
 MARTENS K. & BEHEN F., 1994. A checklist of the Recent non-marine ostracods from the Inland waters of South America. *Trav. Scientif. Mus. Nat. Hist. Natur.* 22: 84 pp.

SCHWALB A. & BURNS S.J., 1999. Holocene environments from stable isotope stratigraphy of ostracodes and authigenic carbonates in Chilean Altiplano lakes. *Palaeogeogr. Palaeoclim. Palaeoecol.*, 148: 153-168.

Authors' Addresses — J. CÁRDENAS, R. FIGUEROA, D. ALVAREZ, R. URRUTIA, Center EULA-Chile, University of Concepcion, Barrio Universitario s/n, Concepción (Chile); e-mail: javieracardenas@udec.cl; ricardofigueroa@udec.cl; denissealvarez@udec.cl; robertourrutia@udec.cl; A. BALTANÁS, Department of Ecology (Fac. Sciences), Universidad Autónoma de Madrid, c/Darwin 2 - 28049 Madrid (Spain); e-mail: angel.baltanas@uam.es; G. CUSMINSKY, Bariloche Regional University Center (Argentina); e-mail: gcusminsky@gmail.com; C. LAPRIDA University of Buenos Aires (Argentina); J. RAMON MERCAU, Andean Studies Institute, University of Buenos Aires-CONICET, Intendente Güiraldes 2160, Ciudad Universitaria - Pabellón II, Buenos Aires (Argentina); e-mail: chechu@gl.fcen.uba.ar; jrm@gl.fcen.uba.ar.